

THE PLANNING CONCEPT OF INTEGRATED GROWTH CENTER FOR JABOTABEK METROPOLITAN DEVELOPMENT AREA

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ABSTRACT

The urban areas particularly the metropolis are the heart of economic activities of their respective nations. It is important to understand the urban structural in response of the tendency of urban growth center based on the analysis of newtowns, business location and urban growth corridors.

This study noted the two keywords notes which have underline the studies on the planning concept and development framework of "integrated growth center", namely, the high risk of large scale new city center development and urban infrastructure as emerging growth corridors.

The key factors driving the urban growth center includes infrastructure network, location of large scale housing and working place, carrying capacity and potency of growth and environmental awareness.

INTRODUCTION

Background

Jakarta has experienced a significance change of urban structural pattern. The expanding areas of Bogor to the south, Bekasi to the east and Tangerang to west are also rapidly becoming one continuous area of JABOTABEK. This area emerged as a large number of matters of public concern included urban deprivation, the effects of past planning and dispersal policies. Furthermore, againts the tendency of globalization of economy as well as the competition and complementary production of industry, it should be considered the tendency of movement of growth center particularly the movement of business function from the primary centers of Jakarta city (such as golden triangle CBD area) to secondary centers which located at the distance of 15 km from the city center such as Tangerang to the west of Jakarta and Bekasi to the east of Jakarta as well as to new centers which located at distance of 30-50 km from the city center.

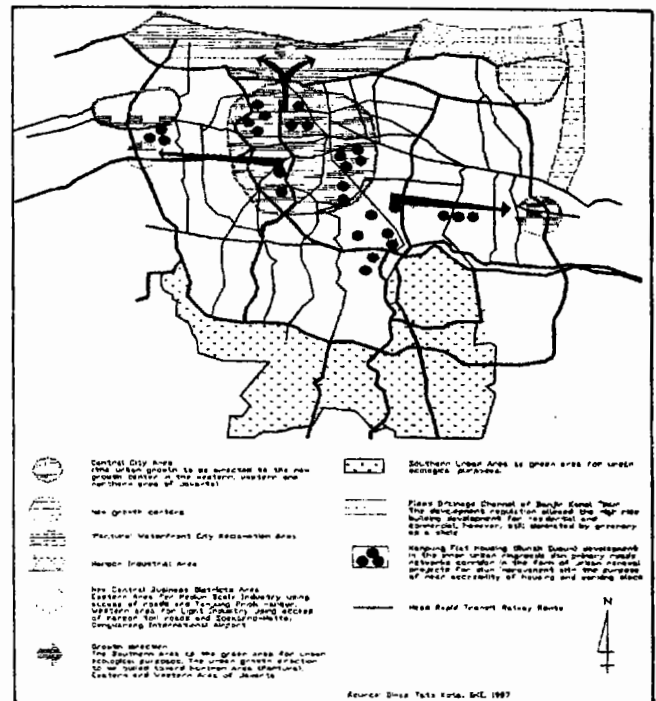


Fig.1. Schematic Plan of JABOTABEK DEVELOPMENT

Source: Dinas Tata Kota DKI, 1997

URBAN DEVELOPMENT DIRECTION

In 1990 there were 122,000 people employed at Jakarta Central Business Districts and another 462,000 in secondary districts. This number is estimated to increase by the year 2010 to 391,000 workers for Jakarta CBD and 725,000 workers for secondary areas. There will also increase the demand

Objective of this study

- to analyze the tendency of growth center and changing patterns.
- to discuss the factors related to the changing tendency of growth centers.
- to identify the alternative direction for proposing the recommendation of the planning concept of integrated growth center for JABOTABEK metropolitan development area.

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for residential areas not only in Jakarta but also in BOTABEK. The population of the both areas is estimated to reach 19 million house in the year 2000 which means 3.4 million houses and 39,900 hectares of land will be needed. It is assumed that 1.6 million units will be for new couples and a house unit is still occupied by 1.06 household. The estimation of land for the activities of various sectors in Jakarta is 5,140 hectares including for shopping centers, offices and industrial activities while for JABOTABEK areas will require 13,040 hectares (Indonesian Property Report, 1995). The forecast land requirements for this development is shown in the following tables.

Tabel 1. Forecast Land Area Requirements for Shopping Centres or Local Retail Centers, DKI Jakarta and BOTABEK, 1990-2010.

	Sector		
	Formal	Informal	Total
DKI JAKARTA			
Number of New Jobs ('000)	470	202	672
Average Floorscape per job	7.5	2	-
Floorscape required ('000 M ²)	3,525	404	3,929
Land area required (hectares)	235	40	278
BOTABEK			
Number of New Jobs ('000)	702	478	1,189
Average Floorscape per job	7.5	2	-
Floorscape required ('000 M ²)	5,265	956	6,221
Land area required (hectares)	351	96	447

Source: Jabotabek Metropolitan Development Plan Review estimates

Tabel 2. Industrial Land Requirements In Jakarta and BOTABEK, 1990-2010

	Formal Sector	Informal Sector	Total
DKI Jakarta			
No. of additional jobs ('000)	469	201	670
Employment density (jobs/ha.)	120	300	146
Land area required (ha.)	3,910	670	44,580
BOTABEK			
No. of additional jobs ('000)	1,150	780	1,930
Employment density (jobs/ha.)	120	300	158
Land area required (ha.)	9,580	2,600	12,180
TOTAL LAND REQUIRED (ha.)	13,490	3,270	16,670

Source: Jabotabek Metropolitan Development Plan Review estimates

Tabel 3 Forecast Land Area Requirements For Office-Based Activities In Jakarta, 1990-2010

Office Sector	Floorscape Required ('000 M ²)	Floorscape Index	Total Land Area Required (hectares)
Primary	4,035	3	1,34.5
Secondary	2,630	3	88.0
Sub-total	6,665	3	2,22.5
Informal	590	1	59.0
TOTAL	7,255	-	2,61.5

Source: Jabotabek Metropolitan Development Plan Review estimates

Tabel 4. Forecast Land Area Requirements For Office-Based Activities In BOTABEK, 1990-2010

Office Sector	Floorscape Required ('000 M ²)	Floorscape Index	Total Land Area Required (hectares)
Formal	6,970	2	3,48.5
Informal	642	1	59.0
TOTAL	7,255	-	4,12.7

Source: Jabotabek Metropolitan Development Plan Review estimates

Tabel 5. Summary of Land Area Requirements for New and Expanded Activities Using Industrial Land, Office Space and Shopping Centres, DKI Jakarta and BOTABEK, 1990-2000 and 2000-2010

Location and Type of Land Use	Land Area Required ('000 hectares)		
	1990-2000	2000-2010	1990-2010
DKI JAKARTA			
Industrial			
Formal	1,944	1,916	3,910
Informal	342	328	670
Total	2,336	2,244	4,580
Office			
CBD-type	69	66	135
Other Formal	44	46	90
Informal	31	29	60
Total	144	141	285
Shopping			
Formal	120	115	235
Informal	21	19	40
Total	144	134	275
BOTABEK			
Industrial			
Formal	4,310	5,270	9,580
Informal	1,170	1,430	2,600
Total	5,480	6,700	12,180
Office			
CBD-type	160	190	350
Other Formal	30	35	65
Informal	190	225	415
Total	380	45	830
Shopping			
Formal	160	190	350
Informal	40	55	95
Total	200	245	445

Source: Jabotabek Metropolitan Development Plan Review estimates

The private development included commercial, office, retail, residential and industrial estates in JABOTABEK has increased greatly and continuous to increase while demand remains strongly. This condition cause the oversupply problems during the period 1990-1992. Jakarta as the major location for national, regional and global business interest need the high level of service and management access in the near future. The difficulties for sustained growth of the large numbers and levels of infrastructure investment required to maintain Jakarta as a primary center will cause business function to shift their activities to subcenters on the main transport network corridors outside the city.

The matter should be considered as important factors for analyzing the direction of urban development. The relationship between business location and infrastructure development cause the high significance degree of subways and railways stations as transport nodes in the near future which affects considerably the degree of business concentrate on the area around the stations which are important as transport nodes of growth center corridors.

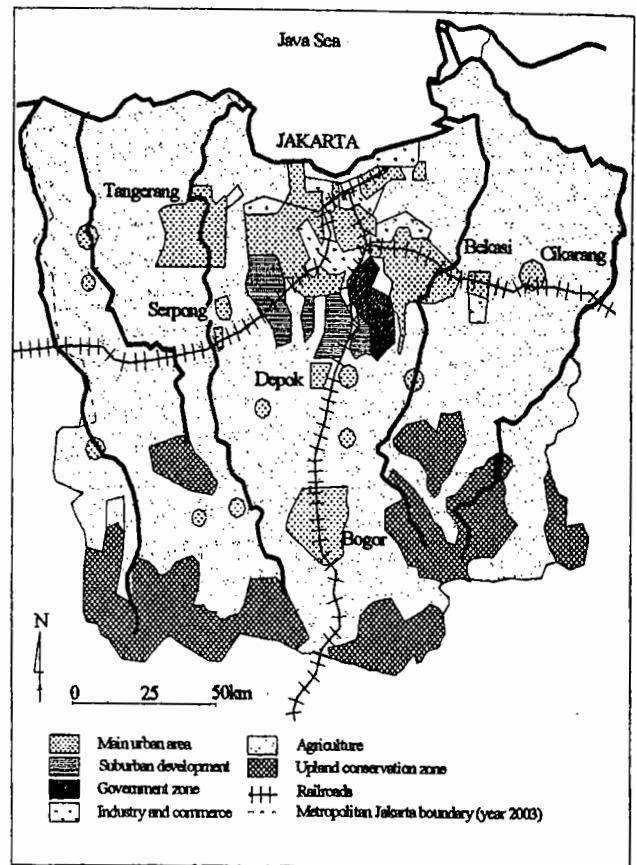


Fig. 3. Outline Plan of Jabotabek
Source: Jabotabek Development Plan Review

NEW TOWNS DEVELOPMENT

The large scale residential developments in Botabek are around 50 ha and newtons development are covering hundreds hectares of land. These development are extending to the urban fringe of Jakarta and outer area towards Bogor, Tangerang and Bekasi. The strategic land use plan use the linear city model with a ladder-type road structure based on the east-west parallel arterial routes interspersed with north-south cross links (see Figure 4).

This newtowns development model give the opportunity for the favorable in allowing open space and interweaving of urban area and green belts. However, the spatial management for traffic control and open area would be very difficult. The development of newtowns with a ladder – type road structure would create the pressure for the area between the new growth centers and the central city particularly on transportation problems.

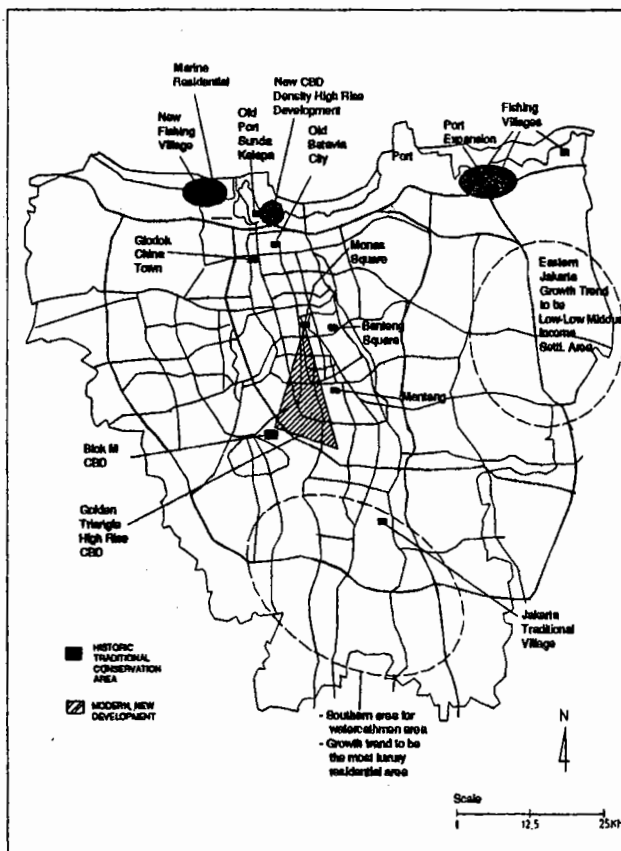


Fig. 2. Image of Jakarta City Development
Source: Author

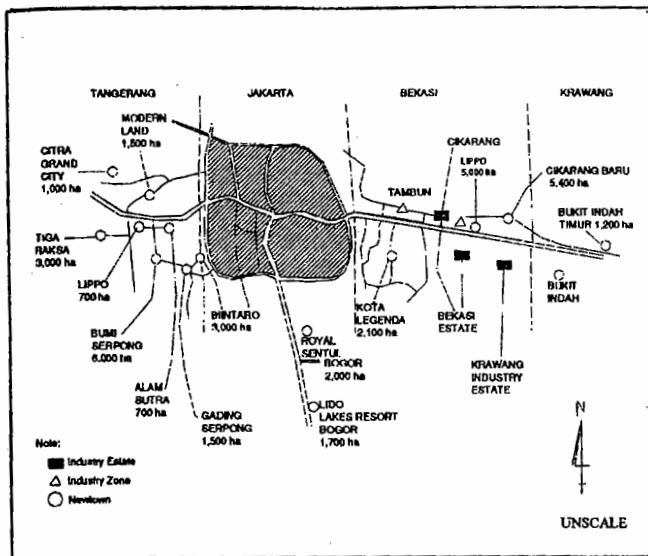


Fig. 4. Schematic Location for New Towns in JABOTABEK
Source: Author

The outer fringe of Jakarta would be the growth area and to be promoted as new urban growth development for newtowns. This outer fringe belt beyond and to the south of Tangerang and Bekasi have the potency for promoting secondary urban growth center. The great variety of urban and suburban centers has not co-exist within the integrated urban development of newtowns, infrastructure and natural resources.

Most of the newtowns model in the outer rim of Jakarta function as "*suburb dormitory towns*". Therefore, most newtowns residents work mainly in Jakarta outside from their residential area. These newtowns have not generated the employment facilities for residents yet. While many manufacturing jobs are located around the east and west approach to Jakarta where much of fringe areas are targeted for middle and upper income people and the workers are likely to remain in central Jakarta. Such development force workers housing too far away from the working place and introduce structural long distance commuting.

BUSINESS LOCATION

There are two types of business activities included financing company and service-manufactur-

ing industry. First, the financing company could be called as '*central business districts location type industry*' which historically most of banks moved their office from old city area of Kota to present CBD of golden triangle '*segitiga emas*' area. There is also the trend to the near future that the new waterfront area will most likely grow as the new CBD.

The second type of business activities is service-manufacturing industry which located in the areas similar to the service industry ('*urban location-type*') and the other are located in suburban area, neighboring provinces and other outside areas ('*suburban location-type*'). Most of the manufacturing companies of suburban location-type were located together with factories while the head office of most urban location-type were located in the different places from the factories.

The companies whose head offices were located in CBD areas land tend to have factories in the suburban areas. Suburban location-type manufacturing company is likely to separate the administrative and productive function activities when their company grow to the necessary points.

There are also some number of economic association which function as intermediate between the public sector and private sector. This economic association were located in a rather wide range of the CBD area, surrounding the CBD area and suburban area.

In general, these economic association could be classified into some types according to their objective of establishment includes 1) government department or agencies who control the responsibility of industry where located within the government and department location, 2) companies belong to the same type of industry located in the CBD area where many major companies located, 3) small scale economics associations established by the company in the same districts and in the same type of industry located in suburban areas.

The significance change of urban structural pattern in the past will need to be reorganized in the response of globalization of economy. Thus, it is important to consider the tendency of movement or changing growth pattern of business function location from the city center to subcenter and new center which have the relationship between economic decision making centers and infrastructure networks development for emerging growth corridors expanding from the present CBD and to support the central business functions.

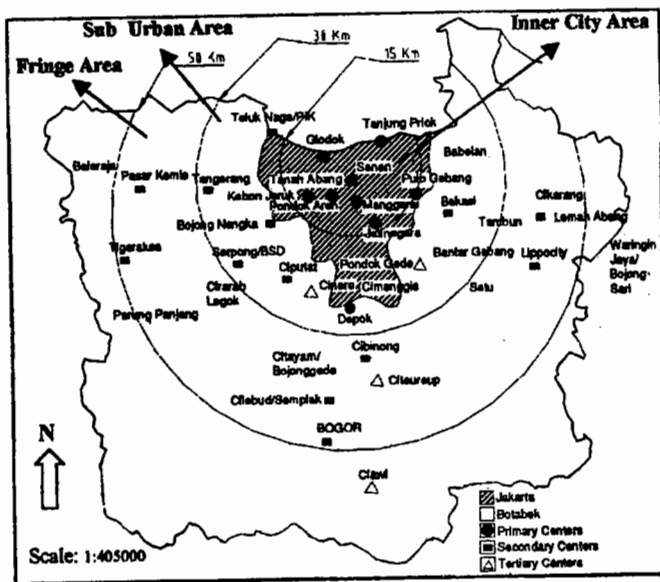


Figure 5 Hierarchy of City Center in JABOTABEK
Source: JABOTABEK Development Plan, 1990)

URBAN GROWTH CORRIDORS

The location of economic decision making centers are spreading along the arterial road of the

linear city model with a ladder-type or "T" letter forms main corridor structure based on the east-west parallel arterial routes interspersed with north-south cross links. There are three main growth corridors. The first corridor is in the city center, where the urban growth were developed along the golden triangle CBD area. While the second corridor is along the east-west corridor of coastal strip adjacent to the Jakarta Bay Area which developed into the westward to Tangerang and eastward to Bekasi. And, the third corridor is in the westward the urban growth will be developed along the corridor leading to the international airport at Cengkareng and the town of Tangerang and in the eastward along the corridor towards the satellite town of Bekasi.

The JABOTABEK Strategic Land Use Plan 1990-2010 proposed the MRT (Mass Rapid Transit) system with the substantial shift from road to rail-way system as an essential prerequisite to develop the sustainable urban structure (source Jabotabek Development Plan Review). The existing system of road has a lack of coherent hierarchy. Toll roads are an essential part of JABOTABEK transportation networks structure. However, it is not a substitute for functional hierarchy of urban roads. Thus, a heavy and light railway integrated network has been proposed as the part of the building of public transport system.

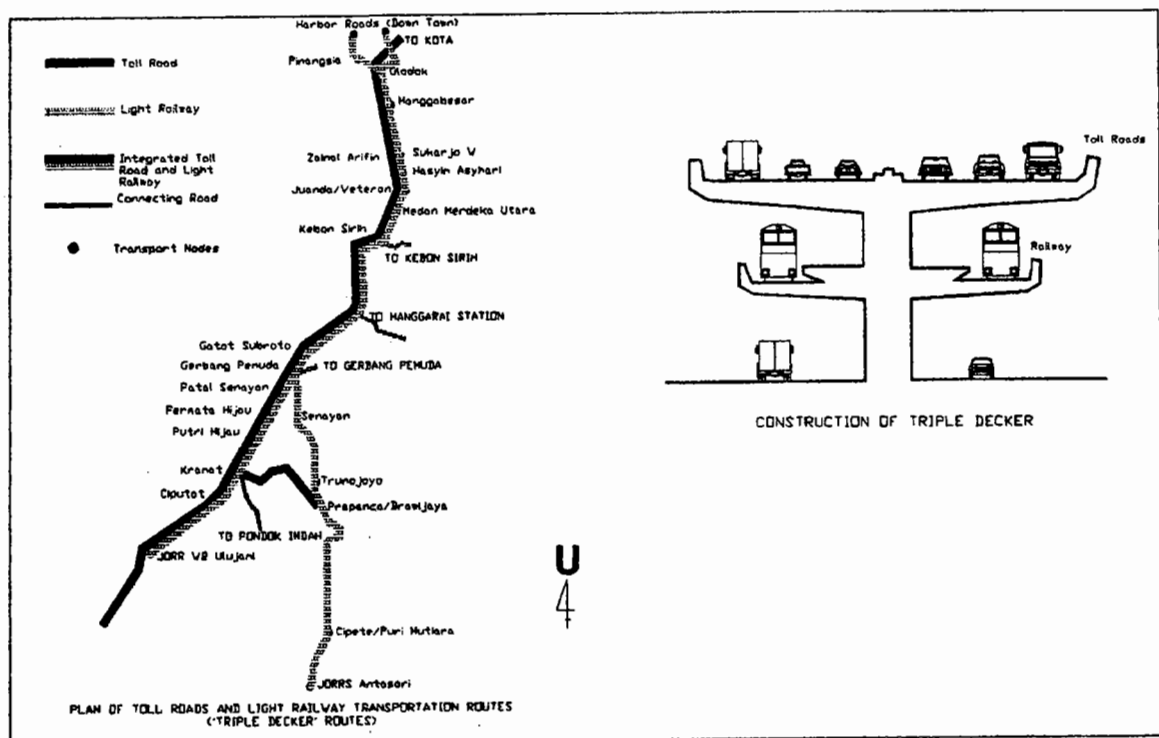


Fig. 6. Schematic Plan of Triple Decker
Source: JABOTABEK Development Plan

The presence of MRT would be in synergy within the development of Jakarta. There are two types of MRT development system. The first type is the subway system in the form of underground railway networks with ten stations connecting Blok M Kebayoran to Harmony (Central Jakarta) and the second type is surface train tracks whether in the form of flyovers or simple surface railway system or some of this type in the form of a 'triple-decker' integrated networks of highway-rail-road connecting Lebak Bulus (South Jakarta) to Blok M Kebayoran (South Jakarta) to Kota (Downtown Jakarta). Another triple decker has been also proposed connecting the areas of Cempaka Putih (East Jakarta) and Tanah Abang (Central Jakarta). The subcenters have grown along subway and triple decker networks system situated along the MRT transportation system from the northern to the southern area of Jakarta inner city.

It could be said that this proposed development plan should consider the traffic management control of these MRT not only for the inner city Jakarta but also for the secondary growth center integratedly within JABOTABEK Metropolitan Development. It could be said that the transportation corresponds to the location of growth corridors and the construction of transportation development will most likely lead to the concentration of central business function along them.

PLANNING CONCEPT AND DEVELOPMENT FRAMEWORK OF INTEGRATED GROWTH CENTER

The three earlier subthemes of new towns, business location and urban growth corridors development would be used as the basic consideration for analyzing the model of integrated growth center. To propose the planning concept and development framework, it is essential to make the assessment of the concept and the problems of JABOTABEK.

Development Plan as noted in the earlier discussion for analyzing the tendency of growth center and changing patterns with the related factors and for identifying the alternative direction of urban development.

From the above discussion, it could be found the two keywords notes as the basic consideration of the planning concept of integrated growth center, namely:

- the high risk of large scale new city center development without sufficient infrastructure development
- urban infrastructure as emerging growth corridors expanding from the present CBD and to support the central business functions.

Some criteria on urban development aspects are also noted for developing the guidelines for planning concept and development framework as follow:

- infrastructure networks
- locations of large scale residential and working place development
- the carrying capacity and potency to improve and to create urban growth center
- the awareness and respectation of environmental aspects.

These two keywords notes and four criteria could be implemented as the basic consideration for proposing the planning concept recommendation as follows:

- the improvement of the existing CBD in the inner area of Jakarta should be planned and linked with the creation of new CBD in suburban and surrounding periphery areas in the integrated infrastructure networks.
- the creation of central cities as secondary order with smaller centers and infrastructure networks linkages with the new urban centers and suburban centers networks of JABOTABEK.
- the development patterns should be more balance in terms of center and periphery interaction, working and dwelling place linkages and carrying capacity of existing urban area, rural area and waterway networks.
- the underdeveloped area should be economically promoted and supported by infrastructure development as new secondary growth center in the urban framework area of JABOTABEK.

The model of planning concept of integrated growth center for JABOTABEK metropolitan development area could be simplify presented as the following diagram.

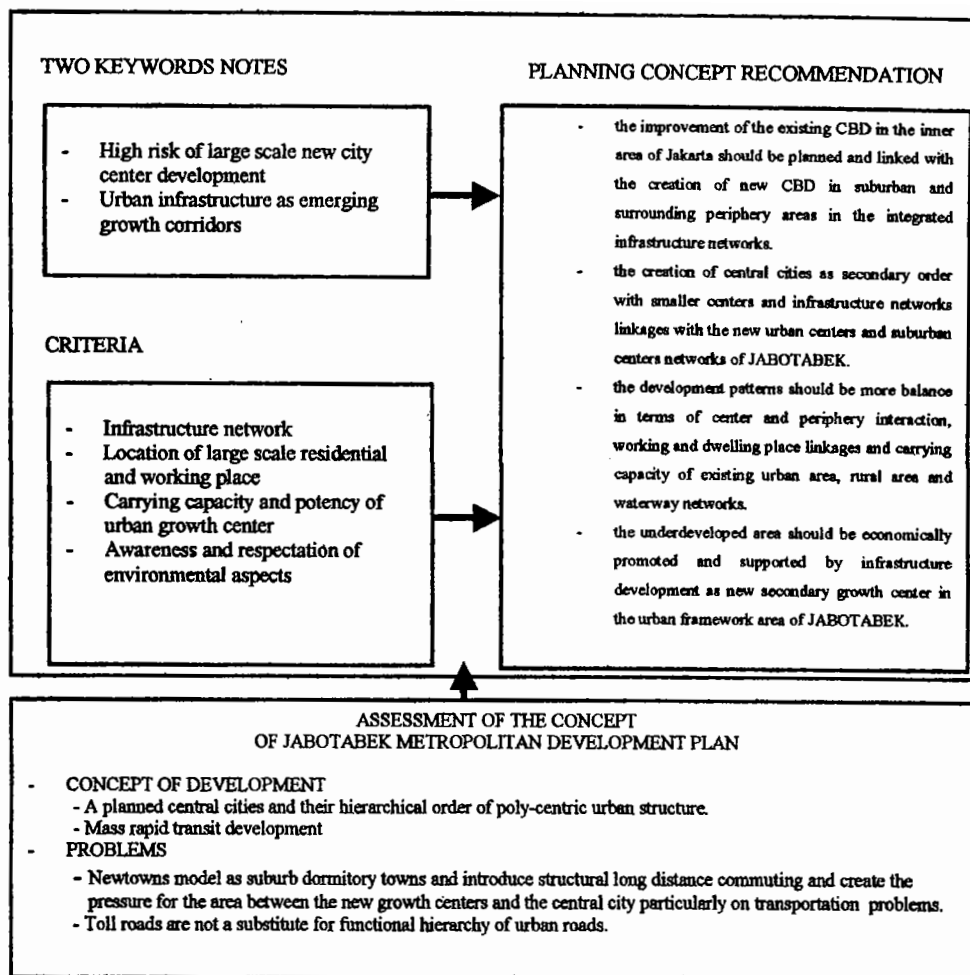


Fig. 7. Model of Planning Concept of Integrated Growth Center for JABOTABEK Metropolitan Development
Source: Author

CONCLUSION

From what has been discussed above, some major notes of this study could be summarized into two keywords notes, namely "*the high risk of large scale new city center development without sufficient supported infrastructure development*" and "*urban infrastructure as emerging growth corridors expanding from the present CBD and to support the central business function*". This study argues that both notes are less than useful as tools for understanding the process of urban development direction as conceived as an interrelation of urban growth center and infrastructure networks.

The concept of newtowns and CBD development serve no useful purpose unless the deal with wider issues affecting the integrated growth center linked with the urban infrastructure networks as a whole. The key factors driving the urban growth center includes infrastructure networks, location of large

scale residential and working place, carrying capacity and potency of urban growth center and environmental awareness and respectation.

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